Amendments To Claims

1. (Currently Amended) A differential amplifier, comprising:

a pair of transistors;

a pair of ~~mutually coupled~~ inductors ~~that are arranged to bias the transistors~~ that provide impedance matching for the differential amplifier and that are arranged such that the inductors have a mutual inductance that increases when the differential amplifier is excited in the common mode.

2. (Currently Amended) The differential amplifier of claim 1, wherein the ~~mutually coupled~~ inductors comprise a transformer.

3. (Currently Amended) The differential amplifier of claim 1, wherein the ~~mutually coupled~~ inductors are arranged to provide ~~output~~ input impedance matching for the differential amplifier.

4. (Currently Amended) The differential amplifier of claim 1, wherein the ~~mutually coupled~~ inductors are ~~arranged to provide input impedance matching for the differential amplifier~~ coupled to a source terminal of each transistor.

5. (Currently Amended) The differential amplifier of claim 1, wherein the ~~mutually coupled~~ inductors are arranged to provide noise control for the differential amplifier.

6. (Currently Amended) The differential amplifier of claim 1, wherein the ~~mutually coupled~~ inductors are

arranged to increase common mode rejection in the differential amplifier.

7. (Currently Amended) The differential amplifier of claim 1, ~~wherein the pair of mutually coupled inductors are coupled in series with a source of each transistor~~ further comprising a second pair of inductors that are arranged to bias the transistors.

8. (Currently Amended) The differential amplifier of ~~claim 1, wherein the mutually coupled inductors are coupled in series with a first terminal of each transistor~~ claim 7, wherein the second pair of inductors are arranged to have a mutual inductance that increases when the differential amplifier is excited in the differential mode.

9. (Currently Amended) The differential amplifier of claim 8, ~~further comprising a second pair of mutually coupled inductors that are coupled in series with a second terminal of each transistor~~ wherein the second pair of inductors comprise a transformer.

10. (Currently Amended) The differential amplifier of claim 9, wherein the ~~mutually coupled~~ second pair of inductors are arranged ~~to bias the transistors and~~ to provide output impedance matching ~~and wherein the second pair of mutually coupled inductors are arranged to bias the transistors and to provide input impedance matching and noise control~~.

11-20. (Cancelled).

21. (New) A method for providing a differential amplifier, comprising arranging a pair of inductors for impedance matching to the differential amplifier such that the inductors have a mutual inductance that increases when the differential amplifier is excited in the common mode.

22. (New) The method of claim 21, wherein arranging comprises arranging the inductors for form a transformer.

23. (New) The method of claim 21, wherein arranging comprises arranging the inductors to provide input impedance matching for the differential amplifier.

24. (New) The method of claim 21, wherein arranging comprises coupling the inductors to a source terminal of each transistor.

25. (New) The method of claim 21, wherein arranging comprises coupling the inductors to provide noise control for the differential amplifier.

26. (New) The method of claim 21, wherein arranging comprises coupling the inductors to increase common mode rejection in the differential amplifier.

27. (New) The method of claim 21, further comprising arranging a second pair of inductors that bias the transistors.

28. (New) The method of claim 27, wherein arranging a second pair of inductors comprises arranging the second pair of inductors to have a mutual inductance that

increases when the differential amplifier is excited in the differential mode.

29. (New) The method of claim 28, wherein arranging a second pair of inductors comprises arranging the second pair of inductors to form a transformer.

30. (New) The method of claim 29, wherein arranging a second pair of inductors comprises arranging the second pair of inductors to provide output impedance matching for the differential amplifier.